

## MARITIME BASED RISK MANAGEMENT AS AN EFFORT TO STRENGTHEN THE ECONOMIC RESILIENCE OF COASTAL COMMUNITIES

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### ABSTRACT

Coastal communities rely heavily on maritime-based economic activities such as fisheries, marine transportation, and coastal tourism. However, these activities are highly exposed to various risks, including environmental, operational, financial, and safety risks. Limited awareness and capacity in risk management often weaken the economic resilience of coastal communities. This community service program aims to strengthen the economic resilience of coastal communities through the implementation of maritime-based risk management. The program was conducted through training, practical workshops, and continuous mentoring focused on risk identification, risk assessment, and risk mitigation strategies tailored to maritime activities. The results indicate an improvement in participants' understanding of maritime risk management, enhanced preparedness in facing operational and environmental risks, and increased economic resilience. This program demonstrates that maritime-based risk management can serve as an effective approach to empowering coastal communities and supporting sustainable coastal economic development.

**Keywords:** Community Service, Maritime Risk Management, Coastal Communities, Economic Resilience, Sustainability

### INTRODUCTION

Coastal communities play a strategic role in supporting national and regional economies through maritime-based activities such as fishing, aquaculture, marine services, and small-scale maritime trade. Despite their economic potential, coastal communities are highly vulnerable to various risks, including climate change impacts, weather uncertainty, operational accidents, market fluctuations, and limited access to risk mitigation knowledge. Maritime risk management has become an essential approach to addressing these challenges. Risk management enables communities to identify potential risks, assess their impacts, and implement mitigation strategies to minimize losses and ensure business continuity. However, many coastal communities lack adequate understanding and practical skills in applying risk management principles to their daily maritime activities.

Therefore, this community service program focuses on implementing maritime-based risk management as a strategic effort to strengthen the economic resilience of coastal communities and promote sustainable maritime development.

### PROBLEM IDENTIFICATION

Based on preliminary observations, discussions with community leaders, and field assessments, several key problems were identified:

1. Limited awareness of maritime risk management concepts among coastal communities.
2. High exposure to environmental and operational risks without adequate mitigation strategies.
3. Low preparedness for maritime accidents and economic disruptions.
4. Weak risk-based decision-making in maritime business activities.
5. Limited integration of safety, environmental protection, and economic sustainability.

These issues highlight the urgent need for capacity-building programs in maritime risk management for coastal communities.

## METHODOLOGY

### Target Participants

The participants of this program consisted of coastal community members engaged in maritime-related economic activities, including fishermen, small-scale maritime entrepreneurs, and community-based marine business groups.

### Implementation Methods

The community service program was implemented using the following methods:

1. **Training Sessions**  
Training materials covered basic concepts of risk management, maritime risk identification, risk assessment techniques, and mitigation strategies tailored to maritime activities.
2. **Practical Workshops**  
Workshops focused on case studies of maritime risks, safety procedures, environmental risk mitigation, and economic risk management in coastal businesses.
3. **Mentoring and Assistance**  
Continuous mentoring was provided to assist participants in applying risk management practices in their daily activities, including safety planning, resource management, and business decision-making.
4. **Evaluation**  
Program effectiveness was evaluated using pre-test and post-test assessments, participant observations, and feedback questionnaires.

## RESULTS AND DISCUSSION

The implementation of the community service program produced several positive outcomes:

1. **Improved Knowledge and Awareness**  
Participants showed increased understanding of maritime risk management concepts and the importance of risk-based decision-making.
2. **Enhanced Risk Preparedness**  
Coastal community members demonstrated improved preparedness in facing environmental, operational, and safety risks related to maritime activities.
3. **Strengthened Economic Resilience**

The adoption of risk mitigation strategies contributed to reduced economic losses and improved business continuity.

**4. Positive Behavioral Change**

Participants exhibited greater awareness of safety practices, environmental protection, and sustainable maritime resource utilization.

These findings indicate that maritime-based risk management is an effective tool for strengthening the economic resilience of coastal communities. The integration of risk management principles into daily maritime activities supports both economic sustainability and community well-being.

**CONCLUSION**

This community service program successfully strengthened the economic resilience of coastal communities through the implementation of maritime-based risk management. Training, workshops, and mentoring enabled participants to better identify, assess, and mitigate maritime risks. Maritime risk management serves as a strategic approach to empowering coastal communities, enhancing safety, and supporting sustainable coastal economic development. Continuous assistance and stakeholder collaboration are recommended to ensure long-term impact.

**RECOMMENDATIONS**

1. Extend risk management mentoring programs for long-term sustainability.
2. Strengthen collaboration with maritime authorities and local governments.
3. Integrate disaster risk reduction and climate adaptation strategies.
4. Promote community-based maritime risk management models.

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